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NSCLC: Surgery Posters, Wed, Sept 5 – Thur, Sept 6

**Number of Surgically Removed Mediastinal Lymph-Nodes (SRMLNs) as prognostic factor for survival in resected early stage non-small-cell lung cancer (NSCLC): a retrospective analysis of a mono-institutional series**

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**Background:** The impact on outcome provided by the extent of lymphadenectomy in patients undergoing lobectomy or pneumonectomy for early stage (I-IIIa) NSCLC is still controversial. Several reports have documented a non significant effect of such procedure on both disease-free and overall-survival (DFS/OS). Nevertheless, especially in trials of adjuvant chemotherapy, a very wide range of nodes number across all series is reported, strongly suggesting a clarification about the eventual supposed prognostic role of this intervention.

**Methods:** A retrospective series of resected NSCLC patients was retrieved from the files of the Regina Elena National Cancer Institute. Correlation between known prognostic factors (sex, type of surgery, histology, tumor size, node involvement, grading) plus the number of SRMLNs and clinical outcome (DFS and OS) was then retrospectively explored using both the Cox regression model (considering SRMLNs as quantitative variable; significance cut-off <0.10) as well as classification and regression trees (CART) analysis.

**Results:** Data referring to 122 NSCLC patients who underwent surgery for stage I-IIIa NSCLC were collected. Multivariate analysis identified SRMLNs as significant independent predictors of both DFS and OS, with a hazard ratio of 0.94 (95% CI 0.90, 0.97, p=0.003), and 0.94 (95% CI 0.90, 0.99, p=0.035), respectively, together with nodal involvement, and grading G3. The CART analysis identified 26 removed nodes as the cut-off for better outcome. When considering SRMLNs as categorical variable, patients with more than 26 removed nodes had a significant better DFS and OS, with a hazard ratio of 3.90 (95% CI 1.16, 13.09, p=0.027), and 4.01 (95% CI 0.93, 18.18, p=0.063), respectively, at the multivariate analysis.

**Conclusions:** Data presented herein open the issue that prognosis of early stage of NSCLC can be influenced by the extent of mediastinal lymphadenectomy. Further prospective analyses are needed to confirm this finding.

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**Surgery in patients with lung cancer aged 80 years or more. Age matters?**

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**Background:** More people now live longer and healthier lives, and consequently more patients in high ages with potentially operable lung tumours are seen. The aim of the present investigation was to evaluate survival after surgery in those patients.

**Material:** All patients aged 80 years or above who had surgery for lung cancer from 1991 to 2005 at the Karolinska University Hospital Sweden were retrospectively reviewed.

**Results:** There were 49 patients, 16 women and 33 men. The mean age was 81.6 years and the oldest patient was 87 years. Fifteen were current smokers, 24 ex-smokers, 9 had never smoked and data was missing in one. Their PS was 0-1. Preoperative diagnosis was available in 14 cases. The upper lobe was removed in 21 patients (right 11, left 10), the lower lobe in 19 (right 10 and left 9), middle lobe in 2, both middle and upper lobe also in 2, and pneumectomy in 5 patients (2 right and 3 left). Two patients had to be reoperated acutely, both because of haemorrhage intrathoracically. There was no perioperative mortality. Of the patients who had a pneumectomy, two died within 3 months, both due to metastases. The other lived approximately 6, 12 and 25 months respectively. Of those 19 operated the first 5 years, 4 are still alive. The longest survivor was operated with right upper lobectomy at age 81 in 1993. Of 36 operated before February 2002, 17 patients survived more than 5 years. In all, 18 patients are still alive.

**Conclusion:** Thoracic surgery in patients aged 80 years or more is feasible if they have a good PS and long-term survival can be expected in a significant number. Perioperative morbidity and mortality are low. With better staging methods such as PET, results can probably be improved. An alternative to surgery is precision radiotherapy but comparative studies are missing.

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**Surgical treatment of bronchial carcinoids, a review of patients operated at a single institution**

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**Objective:** The aim of the current study is to collect and compile factors that could influence the survival of patients who have undergone surgical treatment for bronchial carcinoids.

**Background:** Bronchial carcinoids account for 0.5-5% of all lung tumours according to different sources from literature. In Sweden there is an incidence of 0.7 / 100 000 corresponding to 60-70 new cases every year. Of these 90 % can be classified as typical carcinoids (TC). TC is a low malignant tumour with a five year survival rate of 87-100 %. The atypical carcinoid (AC) shows a more aggressive behaviour with high mortality rate and a strong tendency to produce metastases. It has not come to a consensus whether pulmonary carcinoids should be operated with an anatomical resection or if parenchymal saving surgery is enough. It is also a matter of debate if a radical lymphadenectomy is indicated by patients with pulmonary carcinoids.

**Methods:** Data were collected retrospectively from 1097 patients who underwent surgical treatment on the indication suspected or proven bronchial malignancy at Huddinge University Hospital Stockholm, Sweden, from the start of the department 1992 to the fusion with Karolinska Hospital 2004. From this base we identified all bronchial carcinoids being operated. All tumours were then classified according to the 1999 WHO classification. All patients were included in a routine follow up program, which included x-ray of the lungs and physical examination every 12 month. Cumulative survival was estimated by the Kaplan Meier method. Differences in survival were tested for subgroups using log rank test.

**Results:** There were 39 patients with bronchial carcinoids, constituting 6 % of all operated and diagnosed lung tumours. Of these 20 were males and 19 females. Thirtyone of the 39 patients were classified